

### Claims

- 1 1. Apparatus, comprising:
  - 2 a holder having one and other ends, said one end having an
  - 3 extension and a sleeve extending from said extension;
  - 4 a double ended needle having a base mated to said extension of
  - 5 said one end of said holder, one end of said needle extends away from
  - 6 said holder while other end of said needle extends into said holder, said
  - 7 base of said needle being substantially positioned within said sleeve;
  - 8 a collar mounted about said extension;
  - 9 a housing pivotally extending from said collar;
  - 10 a sheath having an open end, said open end having a circumference
  - 11 that enables the sheath to matingly fit to said sleeve to establish an
  - 12 environment sealed against bacteria intrusion for said one end of said
  - 13 needle.
- 1 2. Apparatus of claim 1, wherein the surface of the open end of said
- 2 sheath and the surface of said sleeve that come into contact with each
- 3 other effect at least one portion of a tortuous path to act as a barrier to seal
- 4 the inside of said sheath against potential bacteria intrusion.
- 1 3. Apparatus of claim 1, wherein said sleeve integrally extends from
- 2 said extension.
- 1 4. Apparatus of claim 1, wherein said sleeve comprises a semi-closed
- 2 end having an opening substantially matching the opening of said
- 3 extension and through which the portion of said base of said needle that

4 mates to said extension passes, said sleeve sealingly fitting onto said  
5 extension when said base of said needle is mated to said extension.

1 5. Apparatus of claim 1, wherein said housing further comprises an  
2 integral locking means for grasping said one end of said needle when said  
3 housing is pivoted to cover said one end of said needle after said sheath  
4 has been removed from said sleeve.

1 6. Apparatus of claim 1, wherein said housing comprises at least one  
2 locking portion that coacts with at least an other locking portion at said  
3 collar or said sleeve to fixedly retain said housing along a longitudinal axis  
4 of said holder to cover said one end of said needle after said sheath has  
5 been removed from said sleeve.

1 7. Apparatus of claim 1, further comprising:  
2 a cover sealing said other end of said holder to provide a sterile  
3 environment for the inside of said holder.

1 8. Apparatus of claim 1, wherein said collar is rotatable about said  
2 extension so that said housing is rotatable relative to said one end of said  
3 needle.

1 9. Apparatus of claim 1, further comprising:  
2 means on said sheath and said sleeve to provide evidence that the  
3 sealed environment of said one end of said needle has been  
4 compromised.

1 10. Blood drawing device comprising a holder having one and other  
2 ends, said one end having a neck to which a sleeve extends, a double  
3 ended needle connected to said neck via a base so that one end of said  
4 needle extends away from said holder and other end of said needle  
5 extends within said holder, a collar having a housing pivotally connected  
6 thereto mounted about said neck, a sheath having an open end matingly  
7 fitted to said sleeve, wherein said base is positioned substantially within  
8 said sleeve and said open end of said sheath is fitted to said sleeve in  
9 such a way that said sleeve, said base and said open end of said sheath  
10 in combination establish an environment impervious to bacteria intrusion  
11 for the space inside said sheath that encloses said one end of said needle.

1 11. Device of claim 10, wherein the surfaces of said sheath that come  
2 into contact with the respective surfaces of said base and said sleeve  
3 effect a tortuous path act as a barrier to prevent contaminants from  
4 entering said space inside said sheath that encloses said one end of said  
5 needle.

1 12. Device of claim 10, wherein said sleeve integrally extends from said  
2 neck.

1 13. Device of claim 10, wherein said sleeve comprises a semi-closed  
2 end having an opening substantially matching the opening of said neck  
3 sealingly fitted onto said neck when said needle is connected to said neck.

1 14. Device of claim 10, wherein said housing further comprises an  
2 integral locking means for grasping said needle when said housing is

3 pivoted to cover said needle after said sheath has been removed from said  
4 sleeve.

1 15. Device of claim 10, wherein said housing comprises at least one  
2 locking portion that coacts with at least an other locking portion at said  
3 collar or said sleeve to fixedly retain said housing along a longitudinal axis  
4 of said holder to cover said needle after said sheath has been removed  
5 from said sleeve.

1 16. Device of claim 10, further comprising:  
2 a cover sealing said other end of said holder to provide a sterile  
3 environment for the inside of said holder; and  
4 a tamper seal on said sheath and sleeve that, when broken,  
5 provides evidence that the sealed environment of said needle has been  
6 compromised.

1 17. Device of claim 10, wherein said collar is rotatable about said neck  
2 and said housing is rotatable relative to said needle.

1 18. A needle device comprising a body having a neck to which a needle  
2 is connected via a base, a sleeve extending from said neck to enclose said  
3 base, a collar having a housing for covering said needle pivotally  
4 connected thereto mounted about said neck, a sheath having an open end  
5 matingly fitted to said sleeve, said sleeve, said base and said open end of  
6 said sheath that mates to said sleeve in combination establish an  
7 environment for the space inside said sheath that encloses said needle  
8 that is impervious to bacteria or contaminant intrusion.

1 19. Device of claim 18, wherein the surfaces of said sheath that come  
2 into contact with the respective surfaces of said base and said sleeve  
3 effect a tortuous path to act as a barrier to prevent bacteria or other  
4 contaminants from entering said space inside said sheath that encloses  
5 said one end of said needle.

1 20. Device of claim 18, wherein said sleeve integrally extends from said  
2 neck.

1 21. Device of claim 18, wherein said sleeve comprises a semi-closed  
2 end having an opening substantially matching the opening of said neck  
3 sealingly fitted onto said neck when said needle is connected to said neck.

1 22. Device of claim 18, wherein said housing further comprises an  
2 integral locking means for grasping said needle when said housing is  
3 pivoted to cover said needle after said sheath has been removed from said  
4 sleeve.

1 23. Device of claim 18, wherein said housing comprises at least one  
2 locking portion that coacts with at least an other locking portion at said  
3 collar or said sleeve to fixedly retain said housing along a longitudinal axis  
4 of said holder to cover said needle after said sheath has been removed  
5 from said sleeve.

1 24. Device of claim 18, further comprising:  
2 a tamper evident seal on said sheath and sleeve that, when broken,  
3 provides evidence that the sealed environment of said needle has been  
4 compromised.

1     25.    Device of claim 18, wherein said collar is rotatable about said neck  
2     and said housing is rotatable relative to said needle.

1     26.    Device of claim 18, wherein said body comprises a Vacutainer  
2     holder having one end wherefrom said neck extends and an other open  
3     end sealed with a cover to provide a sterile environment within said holder.